Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID: SSPTASXY1626

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

```
* * * * * * * * * *
                     Welcome to STN International
                                                    * * * * * * * * * *
NEWS
                 Web Page for STN Seminar Schedule - N. America
NEWS
         JUN 06
                 EPFULL enhanced with 260,000 English abstracts
NEWS 3
         JUN 06
                 KOREAPAT updated with 41,000 documents
NEWS
         JUN 13
                 USPATFULL and USPAT2 updated with 11-character
                 patent numbers for U.S. applications
NEWS
         JUN 19
                 CAS REGISTRY includes selected substances from
                 web-based collections
                 CA/CAplus and USPAT databases updated with IPC
NEWS 6 JUN 25
                 reclassification data
NEWS
     7 JUN 30
                 AEROSPACE enhanced with more than 1 million U.S.
                 patent records
      8
         JUN 30
                 EMBASE, EMBAL, and LEMBASE updated with additional
NEWS
                 options to display authors and affiliated
                 organizations
NEWS 9 JUN 30
                 STN on the Web enhanced with new STN AnaVist
                 Assistant and BLAST plug-in
NEWS 10 JUN 30 STN AnaVist enhanced with database content from EPFULL
NEWS 11 JUL 28 CA/CAplus patent coverage enhanced
NEWS 12 JUL 28 EPFULL enhanced with additional legal status
                 information from the epoline Register
NEWS 13 JUL 28 IFICDB, IFIPAT, and IFIUDB reloaded with enhancements
NEWS 14 JUL 28 STN Viewer performance improved
                 INPADOCDB and INPAFAMDB coverage enhanced
NEWS 15 AUG 01
NEWS 16 AUG 13 CA/CAplus enhanced with printed Chemical Abstracts
                 page images from 1967-1998
NEWS 17 AUG 15 CAOLD to be discontinued on December 31, 2008
NEWS 18 AUG 15 CAplus currency for Korean patents enhanced
NEWS 19
         AUG 27 CAS definition of basic patents expanded to ensure
                 comprehensive access to substance and sequence
                 information
                 Support for STN Express, Versions 6.01 and earlier,
NEWS 20
         SEP 18
                 to be discontinued
NEWS 21
         SEP 25
                 CA/CAplus current-awareness alert options enhanced
                 to accommodate supplemental CAS indexing of
                 exemplified prophetic substances
NEWS 22
         SEP 26
                 WPIDS, WPINDEX, and WPIX coverage of Chinese and
                 and Korean patents enhanced
         SEP 29
NEWS 23
                 IFICLS enhanced with new super search field
NEWS 24
         SEP 29
                 EMBASE and EMBAL enhanced with new search and
                 display fields
NEWS 25
         SEP 30 CAS patent coverage enhanced to include exemplified
```

prophetic substances identified in new Japaneselanguage patents

NEWS 26 OCT 07 EPFULL enhanced with full implementation of EPC2000 NEWS 27 OCT 07 Multiple databases enhanced for more flexible patent number searching

NEWS 28 OCT 22 Current-awareness alert (SDI) setup and editing enhanced

NEWS 29 OCT 22 WPIDS, WPINDEX, and WPIX enhanced with Canadian PCT Applications

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3, AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

NEWS HOURS STN Operating Hours Plus Help Desk Availability

NEWS LOGIN Welcome Banner and News Items

NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

FILE 'HOME' ENTERED AT 10:33:37 ON 23 OCT 2008

=> file reg

COST IN U.S. DOLLARS
SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST
0.21
0.21

FILE 'REGISTRY' ENTERED AT 10:33:52 ON 23 OCT 2008 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2008 American Chemical Society (ACS)

Property values tagged with IC are from the  ${\tt ZIC/VINITI}$  data file provided by InfoChem.

STRUCTURE FILE UPDATES: 21 OCT 2008 HIGHEST RN 1064205-90-8 DICTIONARY FILE UPDATES: 21 OCT 2008 HIGHEST RN 1064205-90-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

Please note that search-term pricing does apply when conducting  ${\tt SmartSELECT}$  searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>

Uploading C:\Program Files\Stnexp\Queries\10580638product.str



chain nodes :

10

ring nodes :

1 2 3 4 5 6 7 8 9

chain bonds :

8-10

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9

exact/norm bonds :

6-9 8-9

exact bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 7-8 8-10

isolated ring systems :

containing 1 :

Match level :

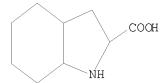
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS

L1 STRUCTURE UPLOADED

=> d 11

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 11

SAMPLE SEARCH INITIATED 10:37:17 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 226 TO ITERATE

100.0% PROCESSED 226 ITERATIONS

SEARCH TIME: 00.00.01

4 ANSWERS

Young, Shawquia, Page 3

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*
BATCH \*\*COMPLETE\*\*
PROJECTED ITERATIONS: 3619 TO 5421

PROJECTED ITERATIONS: 3619 TO 5421 PROJECTED ANSWERS: 4 TO 200

L2 4 SEA SSS SAM L1

=> s 11 full

FULL SEARCH INITIATED 10:37:21 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 4480 TO ITERATE

100.0% PROCESSED 4480 ITERATIONS 88 ANSWERS

SEARCH TIME: 00.00.01

L3 88 SEA SSS FUL L1

=>

Uploading C:\Program Files\Stnexp\Queries\10580638product1.str

chain nodes :

10 12 13 14 15 16 17 18 19 20 21 22

ring nodes :

1 2 3 4 5 6 7 8 9 23 24 25 26 27 28

chain bonds :

8-10 9-12 12-13 12-14 13-15 13-16 15-17 17-18 17-19 18-22 19-20 19-21

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9 23-24 23-28 24-25 25-26 26-27 27-28

exact/norm bonds :

6-9 8-9 9-12 12-14 13-15 15-17 19-20 19-21

exact bonds :

normalized bonds :

23-24 23-28 24-25 25-26 26-27 27-28

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom

# L4 STRUCTURE UPLOADED

=> d 14

L4 HAS NO ANSWERS

L4 STR

Structure attributes must be viewed using STN Express query preparation.

=> s 14

SAMPLE SEARCH INITIATED 10:37:55 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 222 TO ITERATE

100.0% PROCESSED 222 ITERATIONS 6 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 3547 TO 5333
PROJECTED ANSWERS: 6 TO 266

L5 6 SEA SSS SAM L4

=> s 14 full

FULL SEARCH INITIATED 10:37:59 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 4194 TO ITERATE

100.0% PROCESSED 4194 ITERATIONS 126 ANSWERS

SEARCH TIME: 00.00.01

L6 126 SEA SSS FUL L4

=>

Uploading C:\Program Files\Stnexp\Queries\10580638reactant2.str

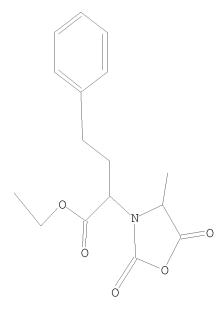
chain nodes :
1 2 3 4 5 6 12 13 14 15 16
ring nodes :
7 8 9 10 11 17 18 19 20 21 22
chain bonds :
1-2 2-3 3-4 4-5 4-6 5-7 5-15 8-12 9-13 11-14 15-16 16-17
ring bonds :
7-8 7-11 8-9 9-10 10-11 17-18 17-22 18-19 19-20 20-21 21-22
exact/norm bonds :
2-3 3-4 4-6 5-7 7-8 7-11 8-9 9-10 9-13 10-11 11-14
exact bonds :
1-2 4-5 5-15 8-12 15-16 16-17
normalized bonds :
17-18 17-22 18-19 19-20 20-21 21-22

# Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:Atom 8:Atom 9:Atom 10:Atom 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:Atom 18:Atom 19:Atom 20:Atom 21:Atom 22:Atom

# L7 STRUCTURE UPLOADED

=> d 17 L7 HAS NO ANSWERS L7 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 17

SAMPLE SEARCH INITIATED 10:39:01 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 4 TO ITERATE

100.0% PROCESSED 4 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*
BATCH \*\*COMPLETE\*\*
PROJECTED ITERATIONS: 4 TO 200
PROJECTED ANSWERS: 0 TO 0

L8 0 SEA SSS SAM L7

=> s 17 full

FULL SEARCH INITIATED 10:39:05 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 85 TO ITERATE

100.0% PROCESSED 85 ITERATIONS 9 ANSWERS

SEARCH TIME: 00.00.01

L9 9 SEA SSS FUL L7

=> file hcaplus

COST IN U.S. DOLLARS
SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 538.30 538.51

FILE 'HCAPLUS' ENTERED AT 10:39:34 ON 23 OCT 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

Young, Shawquia, Page 7

PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 23 Oct 2008 VOL 149 ISS 17 FILE LAST UPDATED: 22 Oct 2008 (20081022/ED)

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2008.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

L10 9 L6/P AND L3/RACT AND L9/RACT

=> d ed abs ibib hitstr tot

L10 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN ED Entered STN: 09 Apr 2007

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

The invention relates to a process for the preparation of (2S, 3aR, 7aS)-octahydroindole-2-carboxylic acid (I), and its use for the preparation of trandolapril (II). Trandolapril is an angiotensin-converting enzyme

inhibitor and is used for the treatment of hypertension. The process of the invention does not require the use of expensive catalyst and allows for the use of readily available starting material to simplify separation procedures. The target compds. may be prepared according to the process

the invention as shown by the following example. Esterification of (3aR,7aS)-octahydroindole-2-carboxylic acid with benzyl alc. in the presence of p-toluenesulfonic acid in toluene followed by liberation of the free base with triethylamine in dichloromethane, purification, and

cater

cleavage to give I. (S)-N-[1-(Ethoxycarbonyl)-3-phenylpropyl]-L-alanine
underwent intramol. heterocyclization with N,N'-carbonyldiimidazole to
form N-carboxyanhydride III, which was amidated with I to give
trandolapril (III).

ACCESSION NUMBER: 2007:388837 BCAPLUS
DOCUMENT NUMBER: 147.541727
TITE: Process for the propertion of trandolapril and

TITLE:

2007:388837 BCAPLUS
147:541727
Process for the preparation of trandolapril and intermediates thereof Joshi, Narendra Shriram; Bhirud, Shekhar Bhaskar; Ramam, Buddhavarapu Pattabhi; Bodkhe, Arjun Rajaram Glenmark Pharmaceuticals Limited, India Indian Pat. Appl., 31pp.
CODEN: INXXBQ
Patent INVENTOR(S): PATENT ASSIGNEE(S):

SOURCE: DOCUMENT TYPE: Patent

LANGUAGE: English LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE A IN 2004MU01060 20060728 IN 2004-MU1060 20041007 PRIORITY APPLN. INFO.: IN 2004-MU1060 20041007

OTHER SOURCE(S): CASREACT 147:541727

IT 84793-24-8P 145438-94-4P,
(28,3AR,7aS)-octahydroindole-2-carboxylic acid
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; process for the preparation of trandolapril and

thereof) RN 84793-24-8 HCAPLUS

L10 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)
intermediates thereof)
RN 87679-37-6 HCAPLUS

NOTE: 1H-Indole-2-carboxylic acid, 1-[(2S)-2-[[(1S)-1-(ethoxycarbonyl)-3-phenylpropyl]amino]-1-oxopropyl]octahydro-, (2S,3aR,7aS)- (CA INDEX

Absolute stereochemistry. Rotation (-).

L10 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued CN 3-Oxazolidineacetic acid, 4-methyl-2,5-dioxo- $\alpha$ -(2-phenylethyl)-, ethyl ester, (a5,48)- (CA INDEX NAME) (Continued)

Absolute stereochemistry.

145438-94-4 HCAPLUS 1H-Indole-2-carboxylic acid, octahydro-, (2S,3aR,7aS)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

88163/-60-0 RL: RCT (Reactant); RACT (Reactant or reagent) (starting material; process for the preparation of trandolapril and

intermediates thereof) 891637-65-6 HCAPLUS | HB-Hndole-2-carboxylic acid, octahydro-, (3aR,7aS)- (CA INDEX NAME)

Absolute stereochemistry.

876.79-37-6P, Trandolapril RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation) IT

(target compound; process for the preparation of trandolapril and

L10 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN ED Entered STN: 19 Mar 2007

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

The invention relates to a process for the preparation of octahydroindole-2-carboxylic acid of formula I, wherein the ring junction is trans, including enantioners, esters, and salts thereof, and more specifically (2S, 3aR, 7aS)-octahydro-1H-indole-2-carboxylic acid (II)

esters and salts thereof. Compound II is a valuable intermediate in the synthesis of the angiotensin converting enzyme (ACE) inhibitor transolapril. The process of the invention avoids the use of expensive, hazardous, toxic, and corrosive chems., very low temps., and gives about 50% of the trans-isomer, making the process of the invention more com. attractive than prior art. The target compds. may be prepared according

to
the process of the invention as shown by the following example.
Rhodium-catalyzed hydrogenation of the hydrochloride of imino acid III in
water under alkaline conditions gave about 1:1 mixture of the trans- and
cis-isomers of I. Fractional crystallization of the mixture from
methanol resulted

anol resulted in the isolation of II and its enantiomer. Acetylation followed by diastereomeric salt formation with cinchonidine and acidification gave IV with 99.7% optical purity. Compound IV underwent deacetylation with hydrochloric acid to give II, which may be used to prepare trandolapril

in a single step.
ACCESSION NUMBER:

2007:300486 HCAPLUS DOCUMENT NUMBER: 147:522095

TITLE:

14:15:22095
Process for the preparation of
trans-octahydro-lH-indole-2-carboxylic acid
bebashish, Datta; Jagannath, Wani Mukesh
Lupin Ltd., India
Indian Fat. Appl., 37pp.
CODEN: INXXBO INVENTOR(S):

PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE: LANGUAGE: English

LANGUAGE:
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
IN 2003MU01033	A	20060120	IN 2003-MU1033	20031003
PRIORITY APPLN. INFO.:			IN 2003-MU1033	20031003

OTHER SOURCE(S): CASREACT 147:522095
IT 82717-40-6P 87679-58-TP 145438-94-4P
RL: IMF (Industrial manufacture); RCT (Reactant); SFN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (intermediate; process for preparation of trans-octahydro-1H-indole-2-carboxylic acid)
RN 82717-40-6 HCAPLUS
CN 1H-Indole-2-carboxylic acid, octahydro- (CA INDEX NAME)

L10 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

CO2H

87679-58-1 HCAPLUS 1H-Indole-2-carboxylic acid, octahydro-, (2R,3aS,7aR)-rel- (CA INDEX NAME)

Relative stereochemistry.

145438-94-4 HCAPLUS 1H-Indole-2-carboxylic acid, octahydro-, (2S,3aR,7aS)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

84793-24-8, N-[1(S)-Ethoxycarbonyl-3-phenylpropyl]-L-alanine N-carboxyanhydride RL: RCT (Reactant); RACT (Reactant or reagent) (starting material; process for preparation of trans-octahydro-1H-indole-2-carboxylic acid) 84793-24-8 HCAPLUS IT

v=.75-24-0 HCRFUNS 3-0xazolidineacetic acid, 4-methyl-2,5-dioxo- $\alpha$ -(2-phenylethyl)-, ethyl ester, ( $\alpha$ S,48)- (CA INDEX NAME)

Absolute stereochemistry.

L10 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN

ED Entered STN: 12 Jan 2007

AB A process for the synthesis of trandolapril comprises condensing

N-[1-(S)-ethoxycarbonyl-3-phenylpropyl]-L-alanine N-carboxyanhydride (I)

with trans-octahydro-1H-indole-2-carboxylic acid in a first organic

solvent

solvent comprising a water immiscible inert organic solvent and in the presence

base, and isolating trandolapril from a second organic solvent. (2S,3aR,7aS)-octahydro-1H-indole-2-carboxylic acid (II) (resolution

process given) may also be used. Thus, II in CH2C12 was treated with Et3N and then with I (preparation given) in CH2C12 followed by stirring for 3 h

then with I (preparation given, to give 39.5% pure trandolapril.

ACCESSION NUMBER: 2007:37921 HCAPLUS
DOCUMENT NUMBER: 146:143003
TITLE: Process for the preparation of trandolapril from N-[1-(S)-ethosycarbonyl-3-phenylpropyl]-L-alanine N-carboxyanhydride and trans-octahydro-1H-indole-2-carboxylic acid.

INVENTOR(S): Kankan, Rajendra Narayanrao; Rao, Dharmaraj Ramachandra; Phull, Manjinder Singh; Sawant, Ashwini; Birari, Dilip Ramdas

PATENT ASSIGNEE(S): Cipla Limited, India; Curtis, Philip, Anthony SOURCE: PCT Int. Appl., 20 pp.

CODEN: PIXXD2
Patent

LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

	PATENT NO.								APPLICATION NO.										
	WO 2007003947				A2 20070111							20060705							
	WO 2007003947			A3		2007	0531												
		W:	AE,	AG,	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,	
			CN,	co,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,	
			GE,	GH,	GM,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KM,	KN,	KP,	
			KR,	KZ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LV,	LY,	MA,	MD,	MG,	MK,	MN,	
			MW,	MX,	MZ,	NA,	NG,	NI,	NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,	RS,	RU,	
			SC,	SD,	SE,	SG,	SK,	SL,	SM,	SY,	TJ,	TM,	TN,	TR,	TT,	TZ,	UA,	UG,	
			US,	UZ,	VC,	VN,	ZA,	ZM,	ZW										
		RW:	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	HU,	IE,	
			IS,	IT,	LT,	LU,	LV,	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,	BF,	ВJ,	
			CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,	TD,	TG,	BW,	GH,	
			GM,	KE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,	AZ,	BY,	
			KG,	KZ,	MD,	RU,	TJ,	TM,	AP,	EA,	EP,	OA							
	IN 2005MU00793				A 20070601				IN 2005-MU793						20050705				
	CA 2614099			A1 20070111				CA 2	006-	2614	20060705								
	EP	1899	300			A2		2008	0319		EP 2	006-	7557	17		2	0060	705	
		R:	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	HU,	IE,	
			IS,	IT,	LI,	LT,	LU,	LV,	MC,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR		
	KR	2008	0466	30		A		2008	0527	KR 2008-702872					20080204				
PRIOR	RIT:	APP	LN.	INFO	. :						IN 2	005-1	MU 79	3	ž	A 2	0050	705	
											WO 2	006-	GB24	96	1	W 2	0060	705	

OTHER SOURCE(S): CASREACT 146:143003

Young, Shawquia, Page 10

L10 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

Absolute stereochemistry. Rotation (-).

Absolute stereochemistry. Rotation (-).

143430-94-4P RL: PUR (Purification or recovery); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) TOR (Reactant or reagent)
(preparation of trandolapril from ethoxycarbonylphenylpropylalanine
N-carboxyanhydride and octahydroindolecarboxylic acid)

145438-94-4 HCAPLUS 1H-Indole-2-carboxylic acid, octahydro-, (2S,3aR,7aS)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

919092-89-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of trandolapril from ethoxycarbonylphenylpropylalanine
N-carboxyanhydride and octahydroindolecarboxylic acid)
919092-89-0 HCAPLUS
1H-Indole-2-carboxylic acid, octahydro-, (3aR,7aS)-rel- (CA INDEX NAME)

Relative stereochemistry.

L10 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

84793-24-8P, N-[1-(S)-Ethoxycarbonyl-3-phenylpropyl]-L-alanine
N-carboxyanhydride
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(preparation of trandolapril from ethoxycarbonylphenylpropylalanine
N-carboxyanhydride and octahydroindolecarboxylic acid)
84793-24-8 HCRPLUS
3-Oxazolidineacetic acid, 4-methyl-2,5-dioxo-α-(2-phenylethyl)-,
ethyl ester, (αS,4S)- (CA INDEX NAME)

Absolute stereochemistry.

L10 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)
IT 87679-37-6P, Trandolapril
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(preparation of perhydroindolecarboxylic acid intermediate in synthesis of trandolapril)
RN 87679-37-6 HCAPLUS
CN 1H-Indole-2-carboxylic acid, 1-[(2S)-2-[[(1S)-1-(ethoxycarbonyl))-3-phenylpropyl]amino]-1-oxopropyl]octahydro-, (2S,3aR,7aS)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

IT

RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of perhydroindolecarboxylic acid intermediate in

synthesis

hesis or trandolapril) 881637-65-6 HCAPLUS 1H-Indole-2-carboxylic acid, octahydro-, (3aR,7aS)- (CA INDEX NAME)

Absolute stereochemistry.

IT 84793-24-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RCT (Reactant or reagent)
(Preparation of perhydroindolecarboxylic acid intermediate in synthesis of
trandolapril)
RN 84793-24-8 BCAPLUS
CN 3-00xacolidineacetic acid, 4-methyl-2,5-dioxo-α-(2-phenylethyl)-,
ethyl ester, (αS,4S)- (CA INDEX NAME)

Absolute stereochemistry.

Young, Shawquia, Page 11

L10 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN

ED Entered STN: 13 Apr 2006

AB Trandolapril intermediate (2S, 3aR, 7aS)-perhydroindole-2-carboxylic acid was prepared by a process which comprises esterification of (3aR, 7aS)-perhydroindole-2-carboxylic acid with an alc. in the presence of

an acid, reacting the acid addition salt with a base and then dibenzoyl-L-tartaric acid or di-p-toluoyl-L-tartaric acid and at least

one
alc., followed by addition of a second base and hydrolysis.

(2S, 3aR, 7aS)-perhydroindole-2-carboxylic acid prepared by this method was used to prepare transclapril.

ACCESSION NUMBER: 2006:341506 HCAPLUS
DOCUMENT NUMBER: 144:350983

Frocess for the preparation of (2S, 3aR, 7aS)-perhydroindole-2-carboxylic acid intermediate in synthesis of transclapril

INVENTOR(S): Joshi, Narendra Shriram; Bhirud, Shekhar Bhaskar; Ramam, Buddhavarapu Pattabhi; Bodkhe, Arjun Rajaram

GOURCE: U.S. Pat. Appl. Fubl., 10 pp.
CODEN: USXXCO
Patent HANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
US 20060079698	A1	20060413	US 2005-245871	20051007		
PRIORITY APPLN. INFO.:			US 2004-616934P P	20041007		

US 2004-616959P P 20041007

OTHER SOURCE(S): IT 145438-94-4P CASREACT 144:350983; MARPAT 144:350983

1404038-94-4P
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation of perhydroindolecarboxylic acid intermediate in

synthesis of trandolapril)

145438-94-4 HCAPLUS 1H-Indole-2-carboxylic acid, octahydro-, (2S,3aR,7aS)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

L10 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

```
L10 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN

ED Entered STN: 17 Jun 2005

AB Trandolapril intermediate (2s, 3aR, 7aS)-octahydro-1H-indole-2-carboxylic acid (or its C-protected derivs. or salts) was prepared by reacting a cyclohexyl aziridine with a dialkyl malonate to form a trans-fused 3-(alkylcarbonyl)octahydroindol-2-one, decarbonylation at the 3-position, conversion of 2-oxo group to an optionally protected carboxylic acid group, and removal of any N-substitution. Examples illustrate the synthetic method, starting with reaction of cyclohexene with chloramine-T to form N-tosylcyclohexanoaziridine.

ACCESSION NUMBER: 2005:23418 HCAPJUS

DOCUMENT NUMBER: 143:44076

ITILE: A method for the preparation of
                                                                                   143:440.00 A method for the preparation of (2S,3aR,7aS)-octahydro-1H-indole-2-carboxylic acid as key intermediate in the preparation of trandolapril
                                                                                 reacting a cyclohexyl aziridine with a dialkyl malonate Cid, Pau Texcontor Etablissement, Liechtenstein PCT Int. Appl., 34 pp. CODN: PIXXD2 Patent English 1
  INVENTOR(S):
  PATENT ASSIGNEE(S):
SOURCE:
 LANGUAGE:
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:
                                                                                   KIND DATE
                                        WO 2005054194
                               RW:
                  EP 1687271
                  EF 1687271 A1 20060809 EF 2004-513621 20041120
R: AT, BE, CH, DE, DK, ES, FF, GB, GR, IT, LI, LU, NI, SE, MC, PT,
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS
US 20070225505 A1 20070927 US 2007-580610 20070212
ITY APPLN. INFO.: EP 2003-257417 A 20031125
 PRIORITY APPLN. INFO.:
                                                                                                                                                WO 2004-EP13377
                                                                                                                                                                                                                  W 20041125
OTHER SOURCE(S): CASREACT 143:44076; MARPAT 143:44076

IT 87679-37-6P, Trandolapril
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
(Preparation)
(preparation of octahydroindolecarboxylic acid as key intermediate in synthesis of trandolapril by reacting cyclohexyl aziridine with
```

L10 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

Relative stereochemistry.

```
L10 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN
```

LIU ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)
malonate)
RN 87679-37-6 HCAPLUS
CN 1H-Indole-2-carboxylic acid, 1-[(25)-2-[[(15)-1-(ethoxycarbonyl)-3-phenylpropyl]amino]-1-oxopropyl]octahydro-, (25,3aR,7aS)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

IT 84793-24-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of octahydroindolecarboxylic acid as key intermediate in synthesis of trandolapril by reacting cyclohexyl aziridine with dialkyl

ky1 malonate) malonate) 84793-24-8 HCAPLUS 3-0Xazolidineacetic acid, 4-methyl-2,5-dioxo- $\alpha$ -(2-phenylethyl)-, ethyl ester, ( $\alpha$ S,4S)- (CA INDEX NAME)

Absolute stereochemistry.

87679-58-1P

8/6/9-38-1P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation of octahydroindolecarboxylic acid as key intermediate in synthesis of trandolapril by reacting cyclohexyl aziridine with

dialkvl

kyl malonate) malonate) 87679-58-1 HCAPLUS 1H-Indole-2-carboxylic acid, octahydro-, (2R,3aS,7aR)-rel- (CA INDEX

L10 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN

ED Entered STN: 10 Jun 2005

AB The invention relates to a method for producing optionally substituted (N-[1-(S)-carbalkoxy-3-phenylpropyl)-S-alanyl-2S, 3aK, 7aS-octahydroindol-2-carboxylic acid) and the pharmaceutically acceptable salts thereof. To this end, a racemic mixture of optionally substituted trans-octahydroindol-2-carboxylic acid is reacted with the N-carboxyanhydride of [N-[1-(S)-alkoxycarbonyl-3-phenylpropyl]-L-alanine], which is optionally substituted on the Ph ring, in an appropriate inert solvent, and the obtained optionally substituted [N-[1-(S)-carbalkoxy-3-phenylpropyl]-S-alanyl-2S, 3aK, 7aS-octahydroindol-2-carboxylic acid), preferably trandolapril, is subsequently isolated, as well as polymorphous forms A and B of translational collabril.

ACCESSION NUMBER: 2005:493585 BCAPLUS DOCUMENT NUMBER: 143:32341

TITLE: Method for producing [N-[1-(S)-carbalkoxy-3-phenylpropyl]-S-alanyl-2S,

2005:493585 HCAPLUS
143:32341 Method for producing
(N-[1-(S)-carbalkoxy-3-phenylpropyl]-S-alanyl-2S,

3aR,

7aS-octahydroindol-2-carboxylic acid) compounds especially trandolapril via their racemic salts Pogutter, Mirko; Rudolf, Felix; Bichsel, Hans-Ulrich; INVENTOR(S):

Bader, Thomas
Azad Pharmaceuticals Ingredients A.-G., Switz.
PCT Int. Appl., 37 pp.
CODEN: PIXXD2 PATENT ASSIGNEE(S):

SOURCE:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION: German

PATENT NO.																	
WO 2005051909		A1 20050		0609	9 WO 2004-CH688						20041115						
	W:	AE,	AG,	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,
		CN,	co,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,
		GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KP,	KR,	KZ,	LC,
		LK.	LR.	LS.	LT.	LU.	LV.	MA.	MD.	MG,	MK.	MN.	MW.	MX.	MZ.	NA.	NI.
		NO.	NZ.	OM.	PG.	PH.	PL,	PT.	RO.	RU.	SC.	SD.	SE.	SG.	SK.	SL.	SY.
		TJ.	TM.	TN.	TR.	TT.	TZ,	UA.	UG.	US.	UZ.	VC.	VN.	YU.	ZA.	ZM.	ZW
	RW:						MW,										
		AZ.	BY.	KG,	KZ.	MD,	RU.	TJ.	TM.	AT.	BE.	BG,	CH,	CY,	CZ.	DE.	DK.
		EE.	ES.	FI.	FR.	GB.	GR,	HU.	IE.	IS.	IT.	LU.	MC.	NL.	PL.	PT.	RO.
							ВJ,										
				TD,			,							_,			
EP	1689						2006	0816		EP 2	004-	7972	45		2	0041	115
							ES,										
							TR,								,	,	,
.TP	2007						2007								2	0041	115
									IN 2006-KN1385 US 2007-580638								
	ZUU7				AI		2007	0014			003-				_	0031	
	npp.	LIV.	TIMEO							un z	005-	2030		4	n 2	0021	120

IT 87679-58-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (method for producing
{N-[1-(S)-carbalkoxy-3-phenylpropyl]-S-alanyl-2S,

L10 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

3aR, 7aS-octahydroindol-2-carboxylic acid) compds. esp. trandolapril
via their racemic salts)

RN 87679-58-1 HCAPLUS

1H-Indole-2-carboxylic acid, octahydro-, (2R, 3aS, 7aR)-rel- (CA INDEX

Relative stereochemistry.

IT 84793-24-8P 87725-72-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(N-[1-(S)-carbalkoxy-3-phenylpropyl]-S-alanyl-2S,
3A, 7aS-octahydcoindol-2-carboxylic acid) compds. especially
trandolapril
via their racemic salts)
RN 84793-24-8 BCAPLUS
CN 3-0xazolidineacetic acid, 4-methyl-2,5-dioxo-α-(2-phenylethyl)-,
ethyl ester, (αS,4S)- (CA INDEX NAME)

Absolute stereochemistry.

87725-72-2 HCAPLUS

1H-Indole-2-carboxylic acid, 1-[(28)-2-[[(18)-1-(ethoxycarbonyl)-3-phenylpropyl]amino]-1-oxopropyl]octahydro-, monohydrochloride,
(28,3ak,7as)- (9C1) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

L10 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

Absolute stereochemistry. Rotation (-).

FORMAT

L10 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

• HC1

IT 852921-57-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(method for producing
{N-[3-(S)-carbalkoxy-3-phenylpropy1]-S-alany1-2S,
3aR, 7aS-octahydroindol-2-carboxylic acid) compds. especially
trandolapril

trandolapril via their racemic salts)

RN 852921-57-4 HCAPLUS

CN 1H-Indole-2-carboxylic acid, 1-[(2S)-2-[[(1S)-1-(ethoxycarbonyl)-3-phenylpropyl]amino]-1-oxopropyl]octahydro-, (2R,3aS,7aR)- (CA INDEX NAME)

Absolute stereochemistry.

IT 87679-37-6P, Trandolapril
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(method for producing
[N-[1-(s)-carbalkoxy-3-phenylpropyl]-S-alanyl-2S,
3aR, 7aS-octahydroindol-2-carboxylic acid) compds. especially
trandolapril
via their racemic salts)
RN 87679-37-6 HCAPLUS
CN 1H-Indole-2-carboxylic acid, 1-[(2S)-2-[[(1S)-1-(ethoxycarbonyl)-3-phenylpropyl]amino]-1-oxopropyl]octahydro-, (2S, 3aR, 7aS)- (CA INDEX
NAME)

L10 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN
ED Entered STN: 06 Aug 2004
AB Disclosed is a process for producing benzyl
(2S,3aR,7aS)-hexahydroindoline-2-carboxylate (I), characterized by

(28,3ak,7as)-hexahydroindoline-2-carboxylate (I), characterized by heating a racemic mixture consisting of (28,3ak,7as)-hexahydroindoline-2-carboxylic acid (II) and (2R,3as,7as)-hexahydroindoline-2-carboxylic acid (III), benzyl alc., and optically active 10-camphorsulfonic acid in a nonact solvent to convert the racemic mixture to benzyl esters, subjecting the diastereomeric salts of the benzyl esters with the optically active 10-camphorsulfonic acid which have been generated in the same reaction system to optical resolution based on a difference in solubility in an oranic

organic solvent, and then treating one of the isomers with a base. This process can simultaneously carry out esterification of a mixture of racemic II

III with benzyl alc. and optical resolution in one step in high yield, III with benzyl aic, and optical resolution in one step in high yaean, shortens the existing process by two steps, and is industrially advantageous. Thus, a racemic mixture of II and III 67.69, benzyl alc. 129.77, and (1R)-(-)-10-camphorsulfonic acid (IV) 97.57 g were added to toluene in a flask fitted with a condenser and a Dean-Stark separator, refluxed with stirring while removing a theor. quantity of water,

illed under reduced pressure to remove the solvent (.apprx.650 mL), and treated with 800 mL tert-Bu Me ether at .apprx.60° with stirring. The precipitated crystals were collected by filtration, successively washed

toluene and tert-Bu  $\mbox{\it Me}$  ether , dried to give a crude crystalline

rereomer salt (189.5 g) which was recrystd. twice from toluene to give the diastereomer I.IV salt (63.5 g) which was added to a mixture of 315 mL tert-Bu Me ether and 63 mL H2O, treated dropwise with 130 mL 10.6%

agueous Na2CO3 solution, stirred for 10 min to give, after workup, 33.2 g I

(64.09

from the racemate).
ACCESSION NUMBER: 2004:633914 HCAPLUS

DOCUMENT NUMBER:

141:140316
Process for producing intermediate for trandolapril TITLE:

esterification of racemic (28,3aR,7aS)-hexahydroindoline-2-carboxylic acid with benzyl alcohol and optical resolution Shimamura, Hiroshi; Nakata, Yoshitaka Ohara Chemical Industries, Ltd., Japan PCT Int. Appl., 15 pp. CODEN: PIXXD2 Patent Japanese

INVENTOR(S):

PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. W0 2004065368 Al 20040805 W0 2004-JE374 20040119
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, II, IN, IS, JF, KE, KG, KF, KR, KR, KZ, LC,

Young, Shawquia, Page 13

L10 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continue LK, LK, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ PRIORITY APPLN. INFO: JF 2003-11889 A (Continued) A 20030121

OTHER SOURCE(S): CASREACT 141:140316

IT 84793-24-8 87679-58-1,
 rel-(2S, 3AR, 7aS)-hexahydroindoline-2-carboxylic acid
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of optically active benzyl
 (2S, 3aR, 7aS)-hexahydroindolinecarboxylate as intermediate for trandolapril by esterification of racemic
 (2SR, 3aRS, 7aSR)-hexahydroindolinecarboxylic acid and optical resolution

Absolute stereochemistry.

87679-58-1 HCAPLUS
1H-Indole-2-carboxylic acid, octahydro-, (2R, 3aS, 7aR)-rel- (CA INDEX

Relative stereochemistry.

87679-37-6P, Trandolapril
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of optically active benzyl
(28, 3aR, 7aS)-hexahydroindolinecarboxylate as intermediate for
trandolapril by esterification of racemic
(2SR, 3aRS, 7aSR)-hexahydroindolinecarboxylic acid and optical
lution

resolution

ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN
Entered STN: 03 Apr 2003
The invention discloses a method for producing angiotensin converting
enzyme inhibitors (S)-PhCHZCHZCH(COZEt)-L-Ala-R (NEPA-R) and
pharmaceutically-acceptable salts via deprotection of carboxy
group-protected derivs. in non-aqueous medium. The product is obtained

high yield with minimal byproduct formation. Thus, NEPA-L-Pro-OSiMe3, prepared by coupling of NEPA-NCA with H-L-Pro-OSiMe3, was stirred with isopropanol at room temperature and treated with maleic acid to afford

87.1% enalapril maleate.
ACCESSION NUMBER:
DOCUMENT NUMBER:
TITLE:
angiotensin

2003:255129 HCAPLUS 138:271979 Method for producing enalapril and related

converting enzyme inhibitors Tien, Mong-Jong; Liu, Yu-Liang Everlight USA, Inc., USA U.S., 7 pp. CODEN: USXXAM INVENTOR(S): PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE:

English LANGUAGE:

LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE US 6541635 В1 20030401 US 2002-178369 TW 2002-91106399 PRIORITY APPLN. INFO.: A 20020329

OTHER SOURCE(S): CASREACT 138:271979

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation) (preparation of enalapril and related angiotensin converting enzyme inhibitors via deprotection of silyl esters)

RN 80876-01-3 HACAPUS

CN 1H-Indole-2-carboxylic acid, 1-[(2S)-2-[[(1S)-1-(ethoxycarbonyl)-3-phenylpropyl]amino]-1-oxopropyl]octahydro-, (2S,3aS,7aS)- (CA INDEX NAME)

Absolute stereochemistry.

LIU ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)
using camphorsulfonic acid)
RN 87679-37-6 HCAPLUS
CN 1H-Indole-2-carboxylic acid, 1-[(2S)-2-[[(1S)-1-(ethoxycarbonyl)-3-phenylpropyl]amino]-1-oxopropyl]octahydro-, (2S,3aR,7aS)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

REFERENCE COUNT:

THERE ARE 31 CITED REFERENCES AVAILABLE FOR

RECORD. ALL CITATIONS AVAILABLE IN THE RE

L10 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

80875-98-5 84793-24-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of enalapril and related angiotensin converting enzyme
inhibitors via deprotection of silyl esters)
80875-98-5 HCAPLUS
1H-Indole-2-carboxylic acid, octahydro-, (2S,3aS,7aS)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

84793-24-8 HCAPLUS

3-Oxazolidineacetic acid, 4-methyl-2,5-dioxo- $\alpha$ -(2-phenylethyl)-, ethyl ester, ( $\alpha$ S,4S)- (CA INDEX NAME)

Absolute stereochemistry.

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L10 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

L10 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued)

84793-24-8 HCAPLUS 3-Oxarolidineacetic acid, 4-methyl-2,5-dioxo- $\alpha$ -(2-phenylethyl)-, ethyl ester, ( $\alpha$ S, 48)- (CA INDEX NAME)

145438-94-4 HCAPLUS 1H-Indole-2-carboxylic acid, octahydro-, (2S,3aR,7aS)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

186194-75-2 HCAPLUS 1H-Indole-2-carboxylic acid, octahydro-, (2S)- (CA INDEX NAME)

Absolute stereochemistry.

IT 876-79-37-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of amino acid salts soluble in organic solvents and their use in

Young, Shawquia, Page 15

L10 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN

ED Entered STN: 12 Apr 2002

A ca-Maino acids salts with organic super bases, RinhCHRCO2
A-NH-Q+-[N(B)D]n [Q = C (n = 1 or 2) or P (n = 3); A, B, D = alkyl,

alkylaryl or may combine to form a heterocyclic group; R = H or a side

chain of an optionally protected amino acid; R1 = H, Ph3C; or R and R1

combine to form a mono-, bi-, or tricyclic heterocyclic ring], were

ared and reacted with N-substituted amino acids to form dipeptides. Thus, treatment of a CH2Cl2 solution of the salt of L-alanine and tert-butyltris(pyrrolidino)phosphorane with Et trans-P-benzoylacrylate, followed by hydrogenolysis, afforded N-[(1S)-1-(ethoxycarbonyl)-3-phenylpropyl]-L-alanine (I). Reaction o

Reaction of

N-(LIS)-I-(etnoxycarbonyl)-S-phenylpropyl)-L-atanine (I). Reaction of the N-carboxyanhydride of I with L-proline in CH2C12 in the presence of DBU yielded enalapril (isolated as the maleate).

ACCESSION NUMBER: 2002:272075 HCAPLUS
136:310181
TITLE: Preparation of amino acid salts soluble in organic solvents and their use in dipeptide synthesis Palmon Nicolau, Francisco Eugenio; Palomo Coll, Antonio Luis
PATENT ASSIGNEE(S): Spain Span, 24 pp.
CODEN: SPXXAD
DOCUMENT TYPE: CODEN: SPXXAD
DOCUMENT TYPE: Spanish
FAMILY ACC. NUM. COUNT: FATENT INFORMATION:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE ES 2156037 ES 2156037 PRIORITY APPLN. INFO.: 20010601 ES 1997-745 19970401 20020301 ES 1997-745 19970401

OTHER SOURCE(S): CASREACT 136:310181; MARPAT 136:310181 IT 80875-98-5 84793-24-8 145438-94-4 186194-75-2

RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of amino acid salts soluble in organic solvents and their use

their use in
dipeptide synthesis)
RN 80875-98-5 HCAPLUS
CN 1H-Indole-2-carboxylic acid, octahydro-, (2S,3aS,7aS)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

L10 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2008 ACS on STN (Continued) dipeptide synthesis)

EN 876-9-37-6 HCAPLUS

CN 1H-Indole-2-carboxylic acid, 1-[(2S)-2-[[(1S)-1-(ethoxycarbonyl)-3-phenylpropyl]amino]-1-oxopropyl]octahydro-, (2S, 3aR, 7aS)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).